Lessons Learned from the Illinois River Basin Restoration Comprehensive Plan

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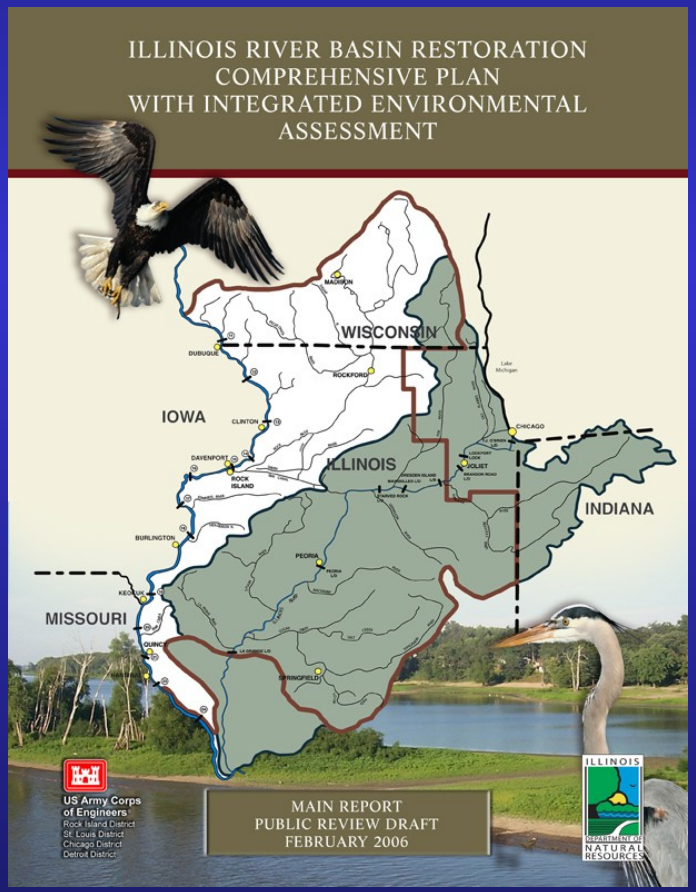

U.S. Army Corps of Engineers
Illinois Department of Natural Resources

Marshall B. Plumley

Project Website:

http://www.mvr.usace.army.mil/ILRiverEco/

One Team: Relevant, Ready, Responsive and Reliable

Illinois River Basin Restoration

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Study Area & Concept

- **Watershed Based**
  - **30,000 sq miles**
  - **11 million people**
- **Multi-Agency**
- **Multi-State**
- **Multi-District**

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Illinois River Basin Restoration

(Sec 519 WRDA 2000)

- **System - Comprehensive Plan**
  - Program/Process for restoration implementation
  - Long Term Resource Monitoring
  - Computerized inventory & analysis system
  - Program for sediment removal & use

- **Site Specific - Critical Restoration Projects**
  - Authority to plan, design and construct
  - $20 million per project limit

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Lesson Learned Topics

- Approach to define problems and establish goals and objectives
- Formulation of restoration needs and near term implementation
- Establishment of collaborative planning and implementation framework

Problem: loss of ecological integrity.

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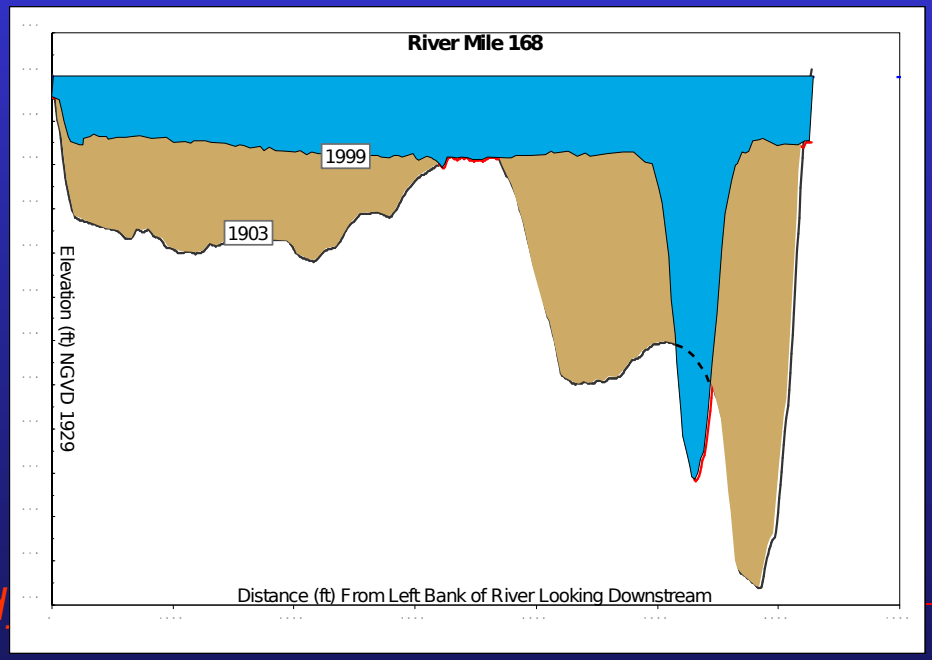
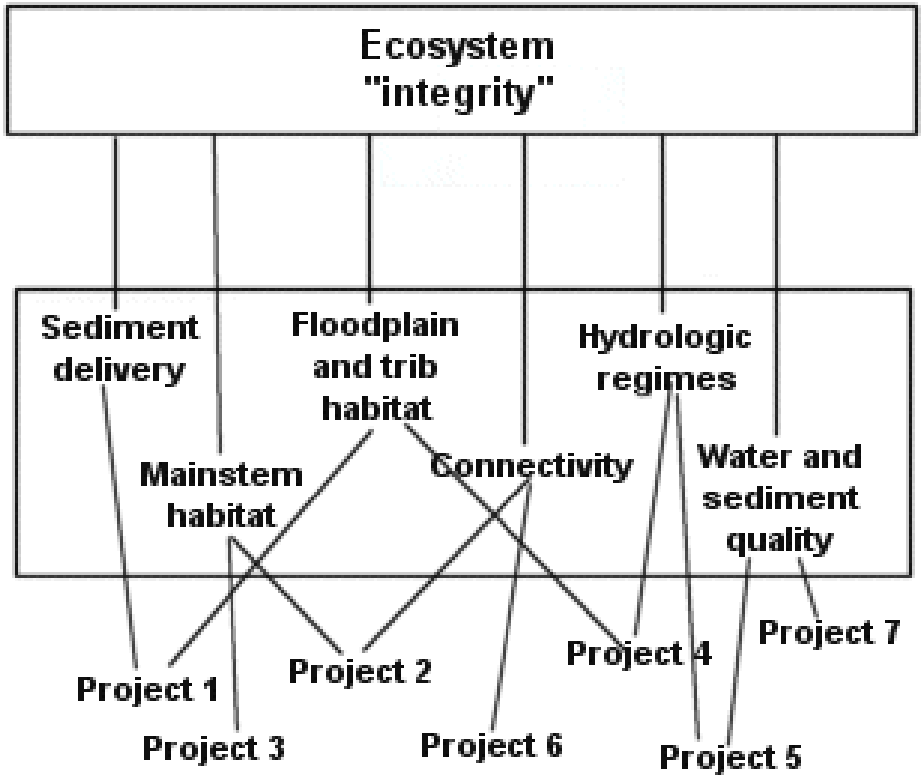
- Loss of aquatic vegetation
- Decline in macroinvertebrates
- Loss of diving ducks and food for migratory waterfowl
- Limitations in fisheries
- Fragmented populations

due to…

- Destabilized tributary streams
- Sedimentation of backwaters & side channels
- Floodplain alteration
- Water level fluctuations



Conceptual Formulation Framework



Monitor progress toward integrity

Evaluate linkages/ assumed system limitations

Monitor progress re: system-limiting factors

Monitor individual project success

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System-wide Goals "Limiting Factors"

Overarching Goal: Restore and maintain ecological integrity

1. **Reduce excessive sediment delivery**
2. **Restore side channels and backwaters habitat diversity**
3. **Restore floodplain, riparian, and aquatic habitat and function**
4. **Increase fish passage (aquatic connectivity)**
5. **Naturalize hydrology and water levels**
6. **Improve wate uality**

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Resource Conditions "Without Project"

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Ecological Integrity

Historic

Existing

Future

Time

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** Not to Scale – Illustrative*

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Objectives

- Reduce sediment delivery to Illinois River by 20%
- Restore 19,000 acres backwater
- Restore 150,000 acres mainstem floodplain
- Restore 150,000 acres trib. floodplain
- Restore 1,000 miles instream habitat
- Restore connectivity
- Restore hydrologic conditions

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Problems, Goals & Objectives Lessons Learned

- Conceptual model - “Limiting Factors”
- Needs Assessment – with focus on desired future conditions, this helped bound alternatives
- Evaluation and summary of both physical and biological processes and linkages
- Allow technical disciplines to focus on own aspects, but also interact with entire team

Formulation of Restoration Alternatives

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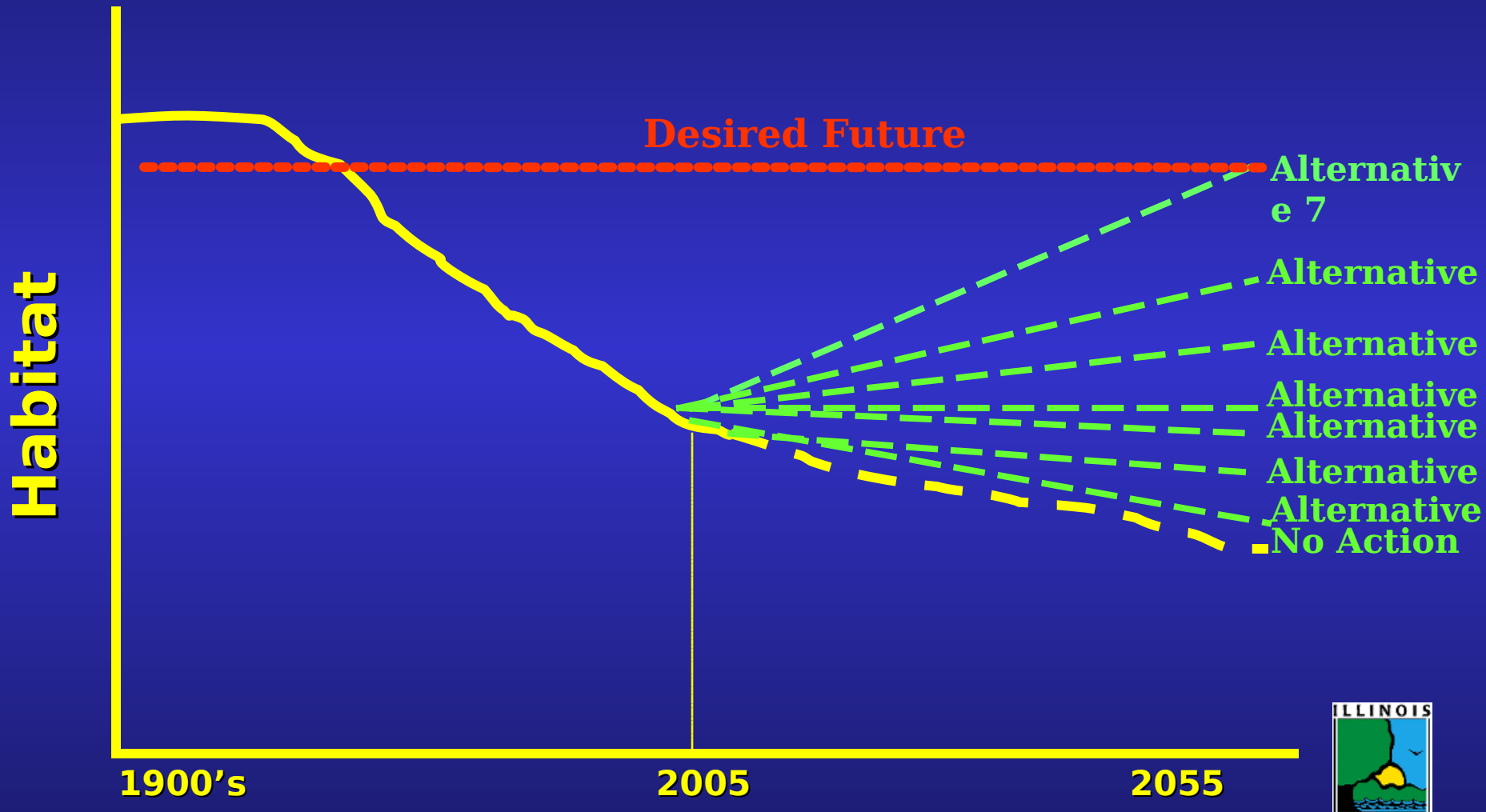

** Not to Scale – illustrative purposes only*

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Recommended Plan
50 Year Implementation
All Agencies/Programs

- **Alt 6 - $7.4 billion total – through 2055**
  - **Projects $6.8 billion**
    - **Small Watersheds – 150 watersheds**
    - **Major Tribs – 88 reach**
    - **Main Stem – 60 backwaters, 35 SC/Islands, 150 floodplain areas**
  - **Technologies and Innovative Approaches $585 M**
  - **Management $55 M**

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Recommendation
Tiered Restoration

- **Tier I - $131.2 million program ($85.3 million Fed) - 2011**
  - **Projects $122.3 M**
    - **Small Watersheds – 8 watersheds**
    - **Major Tribs – 2 reach**
    - **Mainstem – 3 backwaters, 4 SC/Islands, 1 floodplain area**
  - **Technologies and Innovative Approaches $6.1 M**
  - **Management $2.75 M**

- **Tier II - $345.6 million program ($224.7 million Fed) - 2015**
  - **Projects $309.1 M**
    - **Small Watersheds – 20 watersheds**
    - **Major Tribs – 4 reach**
    - **Main Stem – 4 backwaters, 8 SC/Islands, 2 floodplain areas**
  - **Technologies and Innovative Approaches $30.8 M**
  - **Management $5.75 M**

Critical Restorations Projects

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- Peoria Riverfront Upper Island
- Pekin Lake (Northern Unit)
- Pekin Lake (Southern Unit)
- Waubonsie Creek
- McKee Creek
- Kankakee River
- Blackberry Creek
- Iroquois River
- Alton Pool - Side Chan & Island
- LaGrange Pool - Side Chan & Isl
- Tenmile Creek
- Yellow River
- Senachwine Creek
- Crow Creek West
- Starved Rock Pool – Side

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Formulation Lessons Learned

- **Recommendations will be Tiered**
  - **Need to demonstrate benefits with initial projects**
- **Policy will change:**
- **OMB Letter – Returned system studies on Great Lakes, Puget Sound, Ohio River. . . System studies will not be approved without detailed information on specific sites.**
  - **Need detail on some/all sites for OMB approval**

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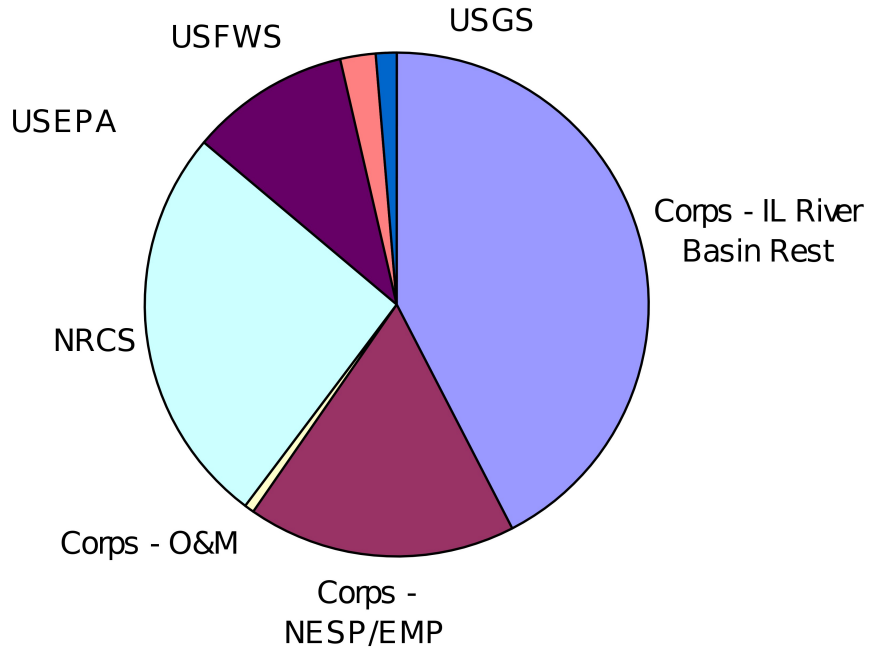
Collaboration

- Illinois DNR and Corps
- Illinois EPA
- Illinois Depart. of Agriculture
- States of Indiana and Wisconsin
- NRCS & FSA
- USFWS
- U.S. EPA
- USGS
- Local Groups - Ecosystem Partnerships SWCDs, NGOs, L&DDs, and local government

Collaborative Planning

Estimated Funding Sources



Estimated amount by Federal agency shown

(state or local match required for

Collaborative Planning and Implementation Lessons Learned

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- A systems approach is the only practical way to restore these large systems
- Great support for general concept
- Critical need for multi-agency work at multiple levels to make this succeed (authorities, budgets, etc.)
- Not all projects and regions of the country get equal responses
- Need for cooperative agreements / implementation tools

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Stakeholder Involvement

- **Feedback positive during study – we provide great value in doing Watershed Level Planning**
- **Frustration with challenges/delays resolving policy (benefits, real estate, partnering with other Fed agencies/assistant agreements)**
- **Frustration with getting implementation funds**

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Questions?

Artwork is provided to the Rock Island District courtesy of Michael Blaser

www.blaserstudio.com **www.steamboatmikey.com**

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